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Abstract

The invention relates to an expansion lance assembly for the partial expansion of a a straight-running tubular hollow profile by exerting a fluidic high internal pressure. The lance comprises a rod-shaped seal carrier detachably attached to a carrier holder, a sealing arrangement which comprises at least two sealing rings formed with oversize at the outside diameter with respect to the inside diameter of the hollow profile and at least one spacer sleeve placed between the pair of sealing rings and the carrier holder and is arranged on the seal carrier, which has an axial inflow bore connected to a fluid high-pressure source and at least one transverse bore branching off from the inflow bore and opening out between the pair of sealing rings, and an axial end support of the sealing arrangement remote from the holder. To achieve the effect that the lance can be used over long periods while ensuring a reliable sealing effect of the sealing arrangement, it is proposed that the sealing rings in each case comprise two components, the first component being formed by a low-abrasion high-pressure-resistant elastomer ring, which bears against the circumferential surface of the seal carrier in such a way that it can be elastically deformed axially by the high internal pressure, and the second component being formed by a high-pressure-resistant supporting ring, which is radially elastic and axially has a very high tensile strength, and that the elastomer ring has on its side facing away from the nearest transverse bore a peripheral shoulder, on which the supporting ring is mounted and which is enclosed by the supporting ring, the seal carrier and an axial stop arranged on the latter.

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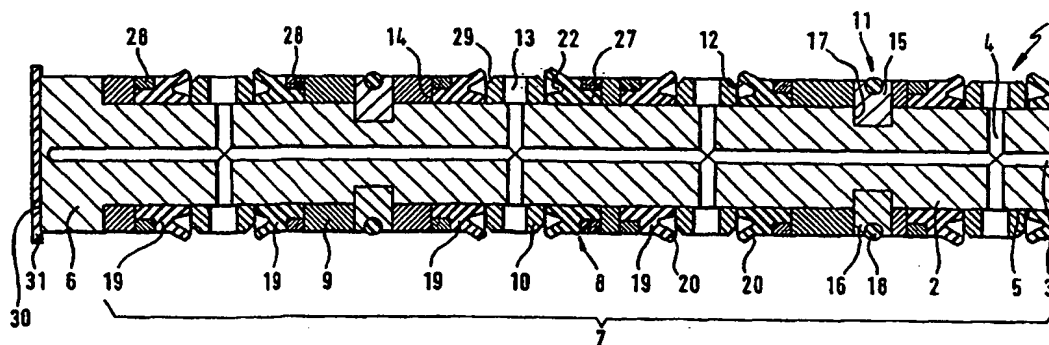
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(54) Title: ASSEMBLED EXPANDING LANCE

(54) Bezeichnung: GEBAUTE AUFWEITLANZE



## (57) Abstract

The invention relates to an assembled expanding lance (1) for partially expanding a tubular, linearly running hollow profile by exerting a fluid internal high pressure. The lance contains sealing rings which are each comprised of two components. The first component is formed from a low-abrasive, high pressure resistant elastomer ring (19) which can be elastically deformed by the internal high pressure. The second component is formed by a high pressure resistant support ring (28) which is radially elastic and which, axially, comprises a very high tensile strength. In addition, the elastomer ring comprises a peripheral shoulder (27) which is mounted on the support ring.

## (57) Zusammenfassung

Die Anmeldung betrifft eine gebaute Aufweitlanze (1) zum partiellen Aufweiten eines geradlinig verlaufenden rohrförmigen Hohlprofiles durch Ausüben eines fluidischen Innenhochdruckes. Die Lanze beinhaltet Dichtringe, die jeweils aus zwei Komponenten bestehen, wobei die erste Komponente von einem Abriebarmen hochdruckfesten Elastomerring (19) gebildet ist, der vom Innenhochdruck elastisch verformbar ist, und wobei die zweite Komponente von einem hochdruckfesten Stützring (28) gebildet ist, der radial elastisch ist und axial eine sehr hohe Zugfestigkeit besitzt, und daß der Elastomerring eine umlaufende Schulter (27) aufweist, auf der der Stützring gelagert ist.